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CLAIMS

[Claim(s)]

[Claim 1]An imaging device which carries out photograph recording of the picture information, and a printing tube Osamu device which manages printing of said picture information recorded with said imaging device, In a printing system with which network connection of the ** was carried out to a print acceptance processing device which transmits said picture information to said printing tube Osamu device, and a print processing system which prints based on directions from said printing tube Osamu device, A printing system managing said printing when it stores said identification information in said imaging device and associates said picture information which received, and said identification information, while said print acceptance processing device publishes identification information which identifies picture information which said imaging device photoed.

[Claim 2]The printing system according to claim 1, wherein said print acceptance processing device is provided with a means to require transmission of said identification information from said imaging device.

[Claim 3]The printing system according to claim 1 or 2, wherein said imaging device is provided with a means to transmit said identification information to said printing tube Osamu device via a client terminal connectable with said network.

[Claim 4]An imaging device which carries out photograph recording of the picture information, and a printing tube Osamu device which manages printing of said picture

information recorded with said imaging device; In a printing system with which network connection of the ** was carried out to a print acceptance processing device which transmits said picture information to said printing tube Osamu device, and a print processing system which prints based on directions from said printing tube Osamu device, While publishing identification information which identifies picture information which said imaging device photoed, said print acceptance processing device, A printing system managing said printing by storing said identification information in a storage which can be freely detached and attached to said imaging device, and associating said picture information which received, and said identification information.
[Claim 5]The printing system according to claim 1 to 4 when it becomes said printing tube Osamu device a situation which said print can hand over, wherein it is provided with a means to report to a user.
[Claim 6]Photograph recording of the picture information characterized by comprising the following is carried out, and they are other information processors and an imaging device which can be communicated.
An identification information reception means which receives identification information which other information processors relate with said picture information, and is published.
A memory measure which memorizes said identification information, and a transmitting means which transmits said identification information to other information processors.

[Claim 7]The imaging device comprising according to claim 6:
A requirement signal reception means which receives an identification information requiring signal from other information processors.
A control means which transmits said identification information which has memorized said memory measure by said transmitting means based on reception of said identification information requiring signal.

[Claim 8]The imaging device according to claim 6 or 7, wherein have a receiving means which receives an electric power supply from other information processors and said transmitting means at least can operate with electric power supplied from said receiving means.
[Claim 9]The imaging device according to claim 7, wherein have a receiving means which receives an electric power supply from other information processors and said control means, said requirement signal reception means, and said transmitting means

at least can operate with electric power supplied from said receiving means.

[Claim 10]The imaging device according to claim 9, wherein said transmitting means, said identification information reception means, said requirement signal reception means, and said receiving means are the composition based on USB2.0 standard and/or an IEEE1394 standard.

[Claim 11]The imaging device according to claim 6 to 10 having a transmission switching means which switches transmission / un-transmitting said identification information by said transmitting means.

[Claim 12]Photograph recording of the picture information characterized by comprising the following is carried out, and it is a removable imaging device about a storage.

A picture information writing means which writes said picture information in said storage.

An identification information reception means which receives identification information which other information processors relate with said picture information, and is published.

A memory measure which memorizes said identification information.

An identification information writing means which writes said identification information in said storage.

[Claim 13]The imaging device according to claim 12, wherein said picture information is written in said storage based on a DPOF standard and said identification information is written in a job description part of a DPOF standard.

[Claim 14]The imaging device according to claim 13, wherein said at least a part of identification information is written in Vendor Unique in a job description part of a DPOF standard.

[Claim 15]The imaging device according to claim 6 to 14, wherein said picture information is written in said storage based on an Exif standard and said identification information is written in an Exif tag defined by an Exif standard.

[Claim 16]The imaging device according to claim 6 to 15 having a write-in switching means which switches writing / un-writing in in of said identification information.

[Claim 17]The imaging device according to claim 6 to 16 which has a displaying means which displays said identification information.

[Claim 18]The imaging device according to claim 6 to 17 having an identification information switching means which carries out the selection change of the identification information which memorizes two or more identification information by said memory measure, and is transmitted to other information processors.

[Claim 19]An imaging device and a print acceptance processing device which can be communicated characterized by comprising the following which were connected with a network and memorized picture information.

A picture information reading means which reads picture information which said imaging device memorizes.

An issuing means which relates with said read picture information and publishes identification information.

An identification information transmitting means which transmits said identification information to said imaging device.

A transmitting means which transmits said picture information and said identification information via a network.

[Claim 20]The print acceptance processing device according to claim 21 characterized by performing a Request to Send of said identification information to said imaging device.

[Claim 21]The print acceptance processing device according to claim 19 or 20 having a power supply means which carries out an electric power supply to said imaging device.

[Claim 22]said power supply means -- USB2.0 standard -- and -- or the print acceptance processing device according to claim 21 being the composition based on an IEEE1394 standard.

[Claim 23]The print acceptance processing device comprising according to claim 19 to 22:

Reading of picture information have a storage reading means which reads picture information written in a removable storage, and according to said picture information reading means.

A means to choose reading of picture information by said storage reading means.

[Claim 24]It is a removable print acceptance processing device about a storage characterized by comprising the following with which it is connected with a network and picture information was written in.

A picture information reading means which reads picture information written in said storage.

An issuing means which relates with said read picture information and publishes identification information.

An identification information writing means which writes said identification information in said storage.
A transmitting means which transmits said picture information and said identification information via a network.

[Claim 25]A print acceptance processing device given in the claims 19 thru/or 24 characterized by comprising the following.
A displaying means which displays a picture based on said read picture information.
A picture selection inputting means which inputs selection of arbitrary pictures among pictures displayed on said displaying means.
[Claim 26]Based on an order input means which inputs a print order of said selected picture, and said print order, The print acceptance processing device according to claim 25, wherein it has an ordering information creating means which generates ordering Information related with said identification information and said transmitting means transmits said ordering information to other information processors.
[Claim 27]The print acceptance processing device according to claim 26, wherein said ordering information comprises a form based on a DPOF standard and said identification information is contained in a job description part of a DPOF standard.
[Claim 28]The print acceptance processing device according to claim 27, wherein said at least a part of identification information is contained in Vender Unique in a job description part of a DPOF standard.
[Claim 29]An imaging device which carries out photograph recording of the picture information, comprising, A printing tube Osamu device which manages printing of said picture information recorded with said imaging device, A print service method in a system by which network connection of the ** was carried out to a print acceptance processing device which transmits said picture information to said printing tube Osamu device, and a print processing system which prints based on directions from said printing tube Osamu device.
A process of transmitting said picture information which carried out photograph recording with said imaging device, and identification information which is related with said picture information and published to said printing tube Osamu device in said print acceptance processing device.
A process of memorizing said transmitted picture information and said identification information in said printing tube Osamu device, and a process of transmitting picture information corresponding to said identification information to said print processing system when a print order which contains said identification information in said

printing tube Osamu device has been transmitted.

[Claim 30]The print service method according to claim 29 including a process reported to a user when it becomes a situation which said print can hand over.
[Claim 31]A print service method which performs image formation based on picture information recorded with an imaging device, comprising:
A process of reading and memorizing picture information photoed with said imaging device.
A process of relating with said picture information and publishing identification information.
A process of writing said identification information in a storage which can be freely detached and attached to an imaging device or an imaging device.
A process of reading said identification information from said imaging device or said storage, A process of reading picture information which is related with said read identification information and is memorized, A process of choosing arbitrary picture information out of said read picture information; A process of inputting a print order of said selected picture information, and a process of generating ordering information related with said identification information based on said inputted print order, A process of performing image formation based on said picture information and said ordering information on a recording medium, and a process of printing a picture corresponding on said recording medium at said individual information or said identification information.

[Claim 32]The print service method according to claim 29 to 31 including a process of reading said picture information in said photographing instrument directly.
[Claim 33]The print service method according to claim 29 to 31 including a process of reading said picture information in a storage which can be freely detached and attached to said photographing instrument.
[Claim 34]A print acceptance processing method characterized by comprising the following in an imaging device and an acceptance processing device which can be communicated which are connected with a network and memorized picture information.
A process of reading picture information which said imaging device memorizes.
A process of relating with said picture information and publishing identification information.
A process of transmitting said identification information to said imaging device.

A process of transmitting said read picture information and identification information via a network.

[Claim 35]A print acceptance processing method according to claim 34 including a process of requiring transmission of said identification information from said imaging device.

[Claim 36]A print acceptance processing method [in / for a storage with which it is connected with a network and picture information was written in / a removable image information processing unit] characterized by comprising the following.

A process of reading picture information written in said storage.

A process of relating with said picture information and publishing identification information.

A process of writing said identification information in said storage.

A process of transmitting said picture information and said identification information via a network.

[Claim 37]A print acceptance processing method comprising according to claim 34 to 36:

A process of receiving said identification information.

A process of displaying a picture based on said picture information related with said identification information.

A process of inputting selection of arbitrary pictures among pictures displayed on said displaying means.

A process of inputting a print order of said selected picture, a process of generating ordering information related with said identification information based on said print order, and a process of transmitting said ordering information.

[Translation done.]

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention]This invention relates to the printing system which can perform especially an order and reception of a print easily about the system for printing based on a print order.

[0002]

[Description of the Prior Art]In recent years, the digital camera and the home digital printer have spread with remarkable vigor by improvement in an image processing technique. In connection with it, the consciousness over a digital image also increases and the user who is using it has also been used for various uses, such as homepage creation, a digital printed matter, etc. of the Internet. Naturally the service of the large lab etc. which, on the other hand, perform the service bureau and mini-laboratory (small-scale processing laboratory) which perform picture print service, and centralized processing which deals with digital image data is increasing, and it goes across the service variation variably.

[0003]As an example of service which deals with such digital image data, a customer uploads the image data of a negative film in the shop to the server currently exhibited on the Internet, Based on peculiar certification information, what can place an order for a request of an extra copy print, a mug with a picture, a T-shirt, etc. is known. A customer can receive offer of service also with those same to whom the inspection was permitted.

[0004]For example, in the Japanese-Patent-Application-No. No. 134124 [11 to] gazette. A picture is displayed as the read-out device which reads image data from the removable media which recorded image data based on the read image data, and the print order accepting device which has a touch type panel which chooses the picture which should be printed is indicated out of the displayed picture.

[0005]In JP,2000-112964,A. While transmitting the picture which identifies the operator who inputs a manuscript picture, checks the displaying condition of the manuscript picture inputted from an image input part by an indicator, and a user means to an offer-of-information server system and registering it, The offer-of-information terminal unit which updates automatically the hypertext information managed by a storage parts store so that search of the registered picture is possible is indicated.

[0006]Meaning user ID and password are published to a user at JP,2000-235642,A. The user area corresponding to user ID is gained to memory storage, a user judges whether it is a valid user according to user ID and a password, and the image processing system which allows only a valid user processing of the image data in the directory corresponding to user ID is indicated.

[0007]

[Problem(s) to be Solved by the Invention]In the above-mentioned service, publish a check at the time of print reception, or ordering ID is published, In order to receive a print in exchange for the check concerned or ordering ID or to access the server field which is keeping the self image data on the Internet, said ordering ID had to be inputted.

[0008]However, management of said ordering ID until it receives a print, or a check is troublesome, and he loses, or often forgot.

[0009]Then, an object of this invention is to provide the device/method used for the printing system and this which can perform more easily the print order of the picture picturized with the digital camera in view of the problem of this conventional technology.

[0010]

[Means for Solving the Problem]An imaging device with which the purpose of above-mentioned this invention carries out photograph recording of the picture information, and a printing tube Osamu device which manages printing of said picture information recorded with said imaging device, In a printing system with which network connection of the ** was carried out to a print acceptance processing device which transmits said picture information to said printing tube Osamu device, and a print processing system which prints based on directions from said printing tube Osamu device, While publishing identification information which identifies picture information which said imaging device photoed, said print acceptance processing device, Said identification information is stored in said imaging device, and it is attained by associating said picture information which received, and said identification information by printing system managing said printing.

[0011]An imaging device with which the above-mentioned purpose carries out photograph recording of the picture information and a printing tube Osamu device which manages printing of said picture information recorded with said imaging device. In a printing system with which network connection of the ** was carried out to a print acceptance processing device which transmits said picture information to said printing tube Osamu device, and a print processing system which prints based on directions from said printing tube Osamu device, While publishing identification information which identifies picture information which said imaging device photoed, said print acceptance processing device, Said identification information is stored in a storage which can be freely detached and attached to said imaging device, and it is attained by associating said picture information which received, and said identification information by printing system managing said printing.

[0012]An identification information reception means which the above-mentioned purpose carries out photograph recording of the picture information, and are other information processors and an imaging device which can be communicated, and receives identification information which other information processors relate with said picture information, and is published, It is attained by imaging device having a memory measure which memorizes said identification information, and a transmitting means which transmits said identification information to other information processors.

[0013]A picture information writing means which the above-mentioned purpose carries out photograph recording of the picture information, and is a removable imaging device about a storage and writes said picture information in said storage, Other information processors are attained by imaging device having an identification information reception means which receives identification information which is related with said picture information and published, a memory measure which memorizes said identification information, and an identification information writing means which writes said identification information in said storage.

[0014]A picture information reading means which the above-mentioned purpose is an imaging device and a print acceptance processing device which can be communicated which were connected with a network and memorized picture information, and reads picture information which said imaging device memorizes, An issuing means which relates with said read picture information and publishes identification information, It is attained by print acceptance processing device having an identification information transmitting means which transmits said identification information to said imaging device, and a transmitting means which transmits said picture information and said identification information via a network.

[0015]A picture information reading means which reads picture information which is a removable print acceptance processing device and was written in said storage in a storage with which the above-mentioned purpose is connected with a network, and picture information was written in, An issuing means which relates with said read picture information and publishes identification information, It is attained by print acceptance processing device having an identification information writing means which writes said identification information in said storage, and a transmitting means which transmits said picture information and said identification information via a network.

[0016]An imaging device with which the above-mentioned purpose carries out photograph recording of the picture information and a printing tube Osamu device which manages printing of said picture information recorded with said imaging device, A print acceptance processing device which transmits said picture information to said printing tube Osamu device, In a print service method in a system by which network connection of the ** was carried out to a print processing system which prints based on directions from said printing tube Osamu device, In a process of transmitting said picture information which carried out photograph recording with said imaging device, and identification information which is related with said picture information and published to said printing tube Osamu device in said print acceptance processing device, and said printing tube Osamu device, When a process of memorizing said transmitted picture information and said identification information, and a print order which contains said identification information in said printing tube Osamu device have been transmitted, It is attained by a print service method including a process of transmitting picture information corresponding to said identification information to said print processing system.

[0017]A process of reading and memorizing picture information which the above-mentioned purpose is a print service method which performs image formation based on picture information recorded with an imaging device, and was photoed with said imaging device, A process of relating with said picture information and publishing identification information, and a process of writing said identification information in a storage which can be freely detached and attached to an imaging device or an imaging device, A process of reading said identification information from said imaging device or said storage, A process of reading picture information which is related with said read identification information and is memorized, A process of choosing arbitrary picture information out of said read picture information, A process of inputting a print order of said selected picture information, and a process of generating ordering information related with said identification information based on said inputted print order, It is attained by a print service method including a process of performing image formation based on said picture information and said ordering information on a recording medium, and a process of printing a picture corresponding on said recording medium at said individual information or said identification information.

[0018]A process of reading picture information which the above-mentioned purpose is the print acceptance processing method in an imaging device and an acceptance processing device which can be communicated which are connected with a network and memorized picture information, and said imaging device memorizes, It is attained by a print acceptance processing method including a process of relating with said picture information and publishing identification information, a process of transmitting said identification information to said imaging device, and a process of transmitting said read picture information and identification information via a network.

[0019]A process of reading picture information which the above-mentioned purpose is the print acceptance processing method [in / for a storage with which it is connected with a network and picture information was written in / a removable image information processing unit], and was written in said storage. It is attained by a print acceptance processing method including a process of relating with said picture information and publishing identification information, a process of writing said identification information in said storage, and a process of transmitting said picture information and said identification information via a network.

[0020]

[Embodiment of the Invention]Hereafter, this invention is explained with reference to an embodiment.

[0021]Drawing 1 is a network service system **** figure containing the printing system concerning this embodiment.

[0022]The client side terminals (client PC) 3, the print acceptance processing device (image data upload device) 2, the center server 4, and the laboratory server 5 are connected to network WAN, such as the Internet. In the lab, the laboratory server 5 is connected to the image forming device 51 via LAN etc. The digital camera 1 is connected with the client side terminals (client PC) 3 or the image data upload device 2.

[0023]Drawing 2 is a functional block diagram of the digital camera 1 concerning the imaging device of this invention.

[0024]The digital camera 1 is provided with the identification information storage parts store 101, the final controlling element 102, card I/F103, I/F104 for communication, USB connector 105, the power supply 106, the whole control part 107, the signal processing part 108, the indicator 109, the image pick-up part 110, ROM111, and RAM112. The memory card 8 (a removable media may be called hereafter) has removable composition. The digital camera 1 makes image data the picture picturized in the image pick-up part 110 by this composition. After carrying out signal processing in the signal processing part 108, processed image data is written in the memory card 8. The image data memorized by the memory card 8 is read, it displays on the indicator 109, the image data memorized by the memory card 8 and ordering ID (identification information) memorized by the identification information storage parts store 101 are read, and it has a function of transmitting to client PC3 via I/F for communication.

[0025]The identification information storage parts store 101 which memorizes ordering ID is an un-volatilizing type storage which memorizes ordering ID for identifying the order received which constitutes and mentions an identification information storage means later in this invention.

[0026]In the identification information storage parts store 101, as for memorizable ordering ID, it does not restrict but one can memorize two or more ordering ID. That is, when an ordering ID change flag other than ordering ID is memorized in the identification information storage parts store 101 and 2nd ordering ID is received, an ordering ID change flag is changed into 2nd ordering ID, and it is made to memorize in the identification information part 101. And a user performs operation of changing an ordering ID change flag, looking at the display of the indicator 109, and it becomes possible to switch so that it may choose which [of 1st and 2nd ordering ID] is used. Under the present circumstances, the final controlling element 102 which performs operation for selection of ordering ID acts as an identification information switching means.

[0027]By doing in this way, even when the user has uploaded two or more image data, Ordering ID can be switched based on an ordering ID change flag, and the image data (it does not restrict in one sheet but there is also a case of two or more data) of the request matched with ordering ID can be specified. Three or more may be sufficient as the number of memorizable ordering ID.

[0028]In this invention, the identification information storage parts store 101 can incorporate ordering ID into image data, and not indispensable composition but can not necessarily memorize it so that it may mention later.

[0029]The final controlling element 102 is a switch group or a touch panel concerning operation of digital cameras, such as an electric power switch, a shutter button, a flash mode configuration switch, an imaging mode configuration switch, photography / reproduction mode configuration switch, etc.

[0030]Card I/F103 equivalent to the picture information writing means of this invention and an identification information writing means is an interface for performing writing/read-out of the image data to the removable memory card 8, the writing of ordering ID, and writing/read-out of attached data to the digital camera 1.

[0031]The memory card 8 which is a removable storage to the digital camera 1, It is a memory for storing image data, ordering ID, various attached data, etc. by the file format, and comprises a flash memory represented with this example by CompactFlash, SmartMedia, an SD card, and the stick memory.

[0032]Although the writing of DPOF data is performed to the memory card 8 from card I/F103, in DPOF1.10 standard, it is also possible in this case to record ordering ID on "VendorUnique" of a job description part. About DPOF, Canon, Inc. and Eastman Kodak Co., Fuji Photo Film Co., Ltd. It is indicated to the reference works (http://www.panasonic.co.jp/avc/video/dpof/dpof_110/white.htm) about DPOF Version 1.10 which four companies of D POF proposals of Matsushita Electric Industrial Co., Ltd. announced.

[0033]The transmitting means and reception means in this invention are an interface based on the publicly known standard for communicating with client PC3, for example, RS232C, IEEE1394, USB, IrDA, Bluetooth, etc. are mentioned.

[0034]In this example, USB connector 105 based on a USB standard is used as a transmitting means, a reception means, and a receiving means, In addition to the signal wire of I/F104 for communication, it is connected to the power supply 106 and electric power is supplied to a power source line from the power supply 106 in each circuit which contains communication I/F104 and the whole control part 107 at least. Transmission of image data or ordering ID is [as opposed to / in the state of OFF of the power supply of the digital camera 1 / client PC3 or the image data upload device 2] possible by doing in this way at the electric supply from client PC3 or the image data upload device 2.

[0035]The whole control part 107 which is a control means in this invention performs various control based on the control program in ROM111. Into these control, the photographing picture signal outputted from the signal processing part 108 is read, The processing which transmits to RAM112, the processing which transmits data to the indicator 109 from RAM112 similarly and the processing which transmits image data to card I/F103 by a file format, and the processing which transmits ordering ID memorized by the identification information storage parts store 101 to communication I/F are included.

[0036]The signal processing part 108 does the A/D conversion of the outputted electrical signal, and performs image processing, such as a gamma correction, a color space conversion, and a white balance, for the digitized signal further.

[0037]The image pick-up part 110 consists of a lens, an optoelectric transducer, a stroboscope (not shown), etc., optoelectric transducers, such as CCD, change into an electrical signal the picture projected with the lens, and a stroboscope emits light corresponding to the directions from a whole control part.

[0038]The indicator 109 which is a displaying means of this invention A liquid crystal display element, a plasma display, Or it is possible to use CRT, and a picture, and a text and the inputted image from an image pick-up part are displayed, or the menu indication for various conditioning, the display of ordering ID memorized by the identification information storage parts store 101, etc. are performed.

[0039]ROM111 has memorized the control program for a whole control part to perform various control of the digital camera 1.

[0040]RAM112 stores the photographed image data transmitted from the signal processing part 108, It is used in order to perform directed image processing, to store temporarily the compressed image data read from the memory card 8, to be used as a work area for graphical-data-compression processing and thawing treatment or to evacuate various data temporarily.

[0041]The whole control part 107 is operation from the final controlling element 102, and it is also possible to regulate transmission and the writing to a storage arbitrarily to other information processors of ordering ID. For example, if an ordering ID valid flag is memorized with ordering ID to use ordering ID, ordering ID can be made into an invalid state by setting the flag which shows invalidity. In the case where the user who receives a print order as an example borrows others' digital camera 1 temporarily etc., it cannot be overemphasized that it enables a print order person to receive print service, without caring about ordering ID. At this time, the final controlling element 102 which performs operation about transmission of ordering ID or regulation of writing acts as a transmission switching means or a write-in switching means.

[0042]It may be made to add ordering ID to the Exif tag of image data stored temporarily. About an Exif tag, Japan Electronic Industry Development Association standard (JAPANELECTRONIC.) INDUSTRY DEVELOPMENT. ASSOCIATION. "ATANDARD Digital Still Camera Image File Format Standard(Exchangeable image file format for Digital Still Camera:Exif. It is indicated in detail in the paragraph of "2.6. Tags" of Version" (2.1JEIDA-49-1998).

[0043]Drawing 3 is a functional block diagram of the picture upload device 2 concerning the print acceptance processing device of this invention, and performs acceptance processing of a print order, etc.

[0044]The picture upload device 2 is provided with the control section 201, the memory 202, the hard disk (HDD) 203, the indicator 204, the final controlling element 205, the input interface 209, the network interface 208, order reception ID issuing part 207, and the card reader 206.

[0045]The input interface 209 which are a picture information reading means of this invention, and an identification information reading means, It has two or more storage acceptance openings or connectors, and storage read stations so that the various storages with which the picture information corresponding to the picture picturized with the digital camera 1 is written in can be received freely. As a storage reading mechanism, for example, magnetic disk drives, such as FD and HiFD, Optical disk drives, such as MD, CD-R, CD-RW, and DVD, SmartMedia (SSFDC), CompactFlash, a memory stick. There are wireless interfaces including cable connection I/F including card I/F corresponding to memory cards including an SD card, USB, and IEEE1394, infrared rays (IrDA), and Bluetooth, etc. There are TIFF, GIF, JPEG, FlashPix, Exif, etc. as a format of a digital image.

[0046]The network interface 208 which are a transmitting means of this invention and a reception means is a communication interface for performing transfer of other information processors and data, and is connected to network WAN, such as the Internet, by the publicly known method.

[0047]The control section 201 controls the picture upload device 2 whole according to the control program memorized by memory 202 or HDD203. For example, the picture information inputted from the media input interface 209 is read. The processing which transmits to HDD203, the processing which associates the picture information for which data is similarly transmitted to the indicator 204 from HDD203, and which was processed and inputted, and ordering ID, and the processing which relates with ordering ID the order inputted from the final controlling element 205, and is processed into order data are included.

[0048]The hard disk (HDD) 203 memorizes the application program which the control section 201 can execute, or memorizes temporarily the image data and order data which were inputted from the media input interface 209.

[0049]The indicator 204 comprises a liquid crystal display element and a CRT display, displays the picture information transmitted from HDD203, or performs order inputted from the final controlling element 205, and presenting of personal information.

[0050]The final controlling element 205 equivalent to the picture selection inputting means of this invention and an order input means comprises a keyboard, a touch panel, a joy stick controller, etc., and performs an order and the input of personal information.

[0051]The card reader 206 is provided with the magnetic-recording reader, the optical reader, and the IC card reader, and reads the membership information currently beforehand recorded on the membership card 9.

[0052]Order reception ID issuing part 207 publishes ordering ID which is the identification information for matching the image data inputted from the media input interface 209, an order content, and personal information per order. An order reception ID issuing part constitutes the issuing means of the identification information of this invention.

[0053]Drawing 4 is a functional block diagram of the center server concerning the printing tube Osamu device of this invention.

[0054]The center server 4 The image data area 401a, the customer data field 401b, It has provided with contents area 401c and 401 d of order progress data areas center storage portion 401, authentication section 402, control-section 403, WWW-data generation part 404, network interface 405, and ROM406, It has a function as what is called a World-Wide-Web (WWW) server.

[0055]It memorizes in the image data area 401a which is a picture information memory measure of this invention by the file format which matched with ordering ID the image data transmitted from the image data upload device 2.

[0056]In the customer data field 401b which is an individual information storage means. It was inputted from image data upload device 2 or client PC3, and personal information, such as a name of the customer transmitted via the network, an address, a telephone number, and an order history, is memorized by the file format matched with ordering ID.

[0057]In the contents area 401c, the information, including a template picture, a contribution text, store information, etc., provided by WWW is memorized by the file format.

[0058]The advancing situation of the printer order processing based on the order data transmitted by the customer is coded, and it is matched with ordering ID by 401d of order progress data areas which are a print order progress information memory measure of this invention, and memorizes in them.

[0059]The authentication section 402 which are a comparison means of this invention and an access-restriction means, Ordering ID transmitted from other information processing terminals including client PC3 via the network and the information memorized to the customer data field 401b are contrasted, and access to the various data memorized by the center storage portion 401 by other information processing terminals is recognized or refused.

[0060]The control section 403 controls the center server 4 whole according to the control program memorized by ROM406. For example, the processing which transmits the picture information inputted from network I/F405 to the image data area 401a, The processing which transmits image data to the laboratory server 5 via a network via network I/F405 from the image data area 401a similarly, The processing which updates the information included in 401 d of order progress data areas based on the received order progress information, The processing which transmits the received order data to the laboratory server 5 via a network via network I/F, and the processing which relates with ordering ID the order inputted from the final controlling element 205, and is processed into order data are included.

[0061]The WWW-data generation part 404 which is an image information generating means for a display of this invention generates the data which suited WWW based on the variety of information memorized by the center storage portion 401.

[0062]The identification information reception means of this invention, a picture information reception means, an access ID reception means, The network interface 405 equivalent to the picture information transmitting means for a display, a personal information reception means, a print order reception means, and a print order processing situation transmitting means, The image data memorized in the order data generated by the WWW data which received the various data transmitted via a network, and were generated by the WWW-data generation part 404, or the control section 406, or the image data area 401a is transmitted.

[0063]Drawing 5 is a functional block diagram of the laboratory server 5 and the lab printer 51 concerning the print processing system of this invention. The laboratory server 5 The image data area 501a, the order data field 501b, It has the lab storage parts store 501 provided with the contents area 501c, the control section 502, the printing data production part 503, the network interface 504, ROM505, and the video interface 506, It has a function as a printer server of what is called image processing and the lab printer 51. The lab printer 51 is provided with the control section 510, ROM511, the memory 512, the color printer part 513, the monochrome printer part 514, the video interface 515, the aftertreatment apparatus 516, and the inspection section 517, and has a function as a printer.

[0064]The image data transmitted to the image data area 501a from the center server is memorized by the file format matched with ordering ID.

[0065]The order data transmitted to the order data field 501b from the center server is memorized by the file format matched with ordering ID.

[0066]The picture by which a template picture, invoice form, etc. are compounded by the contents area 501c with the image data memorized in the image data area 501a, and printing offer is made with a lab printer is memorized by the file format.

[0067]The control section 502 controls the laboratory server 5 whole according to the control program memorized by ROM505. For example, the processing which transmits the picture information inputted from network I/F504 to the printing data production part 503, The processing which transmits the video signal generated by the printing data production part 503 to the lab printer 51 via the video interface 506, The processing which transmits order progress information to the center server 4 by network I/F504 course, and the processing which transmits the control signal which controls the lab printer 51 via the video interface 506 are included.

[0068]The printing data production part 503 performs various publicly known image processing based on picture information and other information, and generates the print data (video signal) which suited the lab printer 51.

[0069]The network interface 504 receives the various data transmitted via a network, and transmits an order advancing situation to the center server 4.

[0070]The video interface 506 receives the control signal which transmitted the print data generated by the printing data production part 503 to the lab printer 51, and was transmitted from the lab printer.

[0071]The control section 510 of the lab printer 51 controls the lab printer 51 according to the control program memorized by ROM511. For example, the processing which transmits the print data inputted from video I/F515 to the color printer part 513 or the monochrome printer part 514, The processing which controls the aftertreatment apparatus 516 based on the information detected in the inspection section 517, The processing which controls the color printer part 513 or the monochrome printer part 514 based on the control commands transmitted by the laboratory server 51, and the processing which transmits control commands via the video interface 515 to a laboratory server are included.

[0072]The memory 512 memorizes temporarily the print data transmitted via the video interface 515.

[0073]The color printer part 513 equivalent to the 1st image forming means of this invention is a printer which carries out color image formation of the picture picturized with the digital camera 1 on the recording form based on the print data transmitted via the video interface 515 from the laboratory server 5.

[0074]Based on the print data transmitted via the video interface 515 from the laboratory server 5, the monochrome printer part 514 equivalent to the 2nd image forming means of this invention, It is a printer which carries out monochrome image formation of the character or figure equivalent to ordering ID or ordering ID related with said image data to the rear face of said recording form, or the non recording part of said color picture. Image formation of ordering ID is carried out with the gestalt of a character or a bar code.

[0075]The color printer part 513 and the image formation method of the monochrome printer 514 may be which methods of a film photo method, an electrophotographying system, an inkjet method, and a thermal method.

[0076]The inspection section 517 equivalent to the individual-identification-information detection means of this invention inspects whether the print output by which read ordering ID formed in the record paper by the photo sensor etc., and image formation was carried out to the print order with the lab printer 51 corresponds.

[0077]The aftertreatment apparatus 516 which is the recording medium processing of this invention performs sorting of a recording form [finishing / image formation], rearrangement, union for every print order, and packing according to control of the control section 510. For example, the device written in the application-for-patent No. 77893 [2000 to] application specification can be used.

[0078]Although the laboratory server 5 which indicated here, the center server 4, and the lab printer 51 are separated functionally, you may be one place or one device physically.

[0079]Operation of the picture upload device 2 concerning this embodiment is explained with reference to drawing 6. The picture upload device 2 concerning this embodiment is installed in a print agency, a convenience store (an agency is called hereafter), etc.

[0080]The customer who asks for a print brings to an agency a removable media or the digital cameras 1 including the memory card 8 which recorded the image data corresponding to the picture picturized with the self digital camera 1.

[0081]Directions of upload of image data will express the screen which requires selection of the input method of image data as the picture upload device with which the initial screen is displayed. In this embodiment. [whether a removable removable media is inserted in the digital camera of this invention, and] Selection (media selection), a removable media, or data read (media reading) from a digital camera is performed for whether it is the data transfer from the digital camera of this invention (S601).

[0082]This media selection of S601 and media reading are explained with reference to drawing 7.

[0083]A user performs the selection input of media (S701).

[0084]When the data transfer from a digital camera is chosen by S702 (this embodiment explains USB to an example), USB connector 105 of the digital camera 1 is connected to the media input interface 209 of the picture upload device 2 (S721). When it has a wireless communication unit, the operation start of the wireless communication unit is carried out.

[0085]If a sensor detects and preparation of data communications is completed (S703), having been connected with the digital camera, A picture upload device starts the setup transaction which transmits the control signal specified by the standard to a digital camera, and requires transmission of a device configuration from the digital camera 1 (S704). The digital camera 1 performs the yne transaction which transmits the signal corresponding to a control signal, and transmits the device configuration which identifies the apparatus characteristic of the digital camera 1 (S722). If a device configuration is received (S705), the Request to Send of the image data continuously written in the memory card 8 of the digital camera 1 from the picture upload device 2 to the digital camera 1 will be performed (S706), Corresponding to it, the digital camera 1 transmits image data (S723), and the received image data (S707) is stored temporarily HDD203 (S708). Repeat S723, S724 and S707, and S708 until all the image data written in the memory card 8 is transmitted hereafter, and the digital camera 1, If it finishes transmitting all the image data, an EOF (End of file) signal will be transmitted to the picture upload device 2, and operation will be ended (S725). The picture upload device 2 which received the EOF signal ends media reading processing, and returns to a main routine (S709).

[0086]On the other hand, when insertion of a removable media is chosen by S701, it waits to insert a removable media in the opening of a picture upload device (S711).

[0087]If a sensor detects that the removable media was fixed to the position which can read image data, the media input interface 209 will read the data recorded on the removable media (S712). If what (S713) image data is stored temporarily for HDD203 is repeated and all the image data is read, media reading processing will be ended and it will return to a main routine (S714).

[0088]If it returns to a main routine, order reception ID issuing part 207 will publish uniquely peculiar order reception ID (ordering ID) (S602), and ordering ID will be transmitted to the camera 1 connected to the picture upload device 2 (S603). When the removable media is chosen by S701, transmission of S603 is transmitted to the removable media connected.

[0089]Reception of ordering ID of the digital camera 1 or the removable media 8 connected to the picture upload device 2 will memorize ordering ID (S622). (S621) In the case of a digital camera, ordering ID is memorized by the identification information storage parts store 101. Or when not providing an identification information storage parts store, it may be made to remember that it mentioned above to the tag of Exif of image data. In the case of a removable media, it may be in the predetermined field in a removable media, and may be made to memorize to "Vendor Unique" of the job description part based on the DPOF standard mentioned above.

[0090]All the pictures corresponding to the image data read by S601 are displayed on the screen of the indicator 204 in index (S604). A removable media or a digital camera is received at the same picture, When full-sized image data and the thumbnail image data whose data volume is smaller than full-sized image data are recorded, in this index display, a picture will be displayed based on thumbnail image data. When image data with small data volume is not memorized, from the read full-sized image data, image data with small data volume is generated, and it may be made to carry out an index display.

[0091]Although the user can judge whether a print order is performed in this stage and a result can also be inputted (S605), it is also possible for a user to only register image data and for it to be made to perform a actual print order behind in this stage. Thus, if you set, it is convenient when placing an order by package, after only uploading, for example about image data like a set photograph, exhibiting image data and collecting a purchasing applicant.

[0092]When carrying out a print order in this stage, a user chooses a desired picture out of the displayed picture (S606), and performs a print order (S607). Specification of the service kind whether an order content is the information about the receipt of the done print, i.e., a usual print or postcard print, In a postcard print, specification of the existence of specification of the kind of postcard, the variety of a print paper, print size, print number of sheets, marginal width, and gloss, etc. is inputted from the final controlling element 205, and the inputted order content is stored temporarily in the memory 202 as order data.

[0093]In addition, the kind of image processing performed to image data is also described. As a kind of image processing, there are monochrome finishing, sepia finishing, bloodshot-eyes amendment finishing, trimming, etc., for example.

[0094]For mischievous prevention of uploading the picture which does not have the volition of a print order from the start in large quantities, When the print number of sheets ordered in S608 exceeds constant value, or when the number of the image data read by S609 exceeds constant value, the input of a user's personal information is required (S610). The items which need an input are a name, an address, a telephone number, etc. The inputted personal information is stored temporarily in the memory 202.

[0095]The image data stored temporarily HDD203 is matched with ordering ID (S611). When personal information and order data are inputted by the final controlling element 205, these are also matched together and are transmitted to the center server 3 via the Internet (S612).

[0096]As an example of matching, consider it as the name which used ordering ID as a file name of image data or order data, for example, or, Or the tabular format file which may attain by considering it as the name which used ordering ID as a directory name containing image data or order data, and also shows the correspondence relation between a file name and ordering ID is created separately, and it may be made for this tabular format file to also transmit together.

[0097]With the name using ordering ID, if an ordering ID simple substance is made into a file name (for example, form of "ordering ID.jpg"), or a directory name, here, Since only one is matched in a picture or a directory to one ordering ID, The thing which enabled it to correspond to two or more unique files using ordering ID is said, As an example, it is "ordering ID+ photographing time .jpg", "ordering ID+ time received .prg", "ordering ID+ order consecutive numbers", etc., and it is desirable by adding to ordering ID to add the value which can be made into a unique name, and a numerical value.

[0098]The ordering information matched on this occasion comprises a form based on the DPOF standard mentioned above.

[0099]On the other hand, the center server which has a communication function, If a data transfer is completed (S631-S632), via the Internet, The image data upload device 2 (S613) which transmitted that the data transfer was performed to the image data upload device 2 of the agency (incoming call notice) (S633), and received the incoming call notice, A removable media is discharged, or communication with a digital camera is ended, and it displays on the indicator 204 that transmission of image data was completed.

[0100]Operation of the center server concerning this embodiment and client PC is explained with reference to drawing 8.

[0101]When there is transmission of data from the image data upload device 2, (S801), transmitted ordering ID, and the image data, personal information and order data which are matched with this are memorized by the center storage portion 401 (S802).

[0102]And judgment whether the image data upload device 2 performed the print order, Namely, when it judges whether order data was transmitted from the image data upload device 2 (S803) and order data is not transmitted, Memory of image data is interlocked with, the order processing situation which was matched with ordering ID by 401 d of order progress data areas, and was automatically generated is made "finishing [picture upload]" (S804), and it shifts to the connection waiting from a user (S805). The user who did not order a print by the above-mentioned S605 can order a print here. When an order is already placed (i.e., when order data is transmitted), it progresses to S811.

[0103]Although the user can go to an agency, can input ordering ID again and can also do a print order from an uploaded picture, he can also perform a print order via the Internet from client PC3.

[0104]When performing a print order via the Internet from client PC3, a user, It connects with the center server of the universal resource locator (URL) beforehand defined using the web browser etc. from client PC3 via the Internet (S821), and ordering ID is inputted.

[0105]The input (S829) from a keyboard is possible for the input of ordering ID, and it is also possible to input the removable memory card 8 automatically into the digital camera 1 of this invention or the digital camera of this invention by connecting with client PC3.

[0106]If the digital camera 1 of this invention is connected (S822), the plug-in application beforehand stored in the memory measure of client PC3 will start, and communication with the digital camera 1 will be started.

[0107]A sensor detects having been connected with the digital camera 1, and client PC3 performs the setup transaction which transmits the control signal specified by USB2.0 standard to the digital camera 1, and It requires ordering ID (S823). The digital camera 1 performs the yne transaction which transmits the signal corresponding to a control signal, and reads ordering ID memorized to the identification information storage parts store 101 or the memory card 8, and transmits (S831). It is received by client PC3 and transmitted ordering ID is stored temporarily in a memory (S824).

[0108]At this time, the power supply of the digital camera 1 does not need to be switched on and the above-mentioned transaction is performed only with the electric power supplied from client PC3 via a USB connector. The same operation is possible also when it has a connecting means of an IEEE1394 standard.

[0109]When connecting a removable memory card to the digital camera 1 client PC3 (not shown), if a sensor detects having inserted the memory card in the card reader, The plug-in application beforehand stored in the memory measure of client PC3 starts, and the signal which can be read is transmitted. Following this signal that can be read, a card reader reads ordering ID recorded on the memory card, and stores it temporarily in a memory.

[0110]Ordering ID stored temporarily in the memory is transmitted to a center server like the case where it is inputted from a keyboard. (S825) The center server 4 which received ordering ID is searched to the image data corresponding to ordering ID which received out of the image data stored in (S807) and the image data area 401a, and generates the image data for a display based on this (S808). With the image data for a display, it comprises a graphics file linked to HyperText Markup Language (HTML) and the HTML concerned, A graphics file reduces the resolution of the original image data memorized in the image data area 401a, and image size, and is changed suitably for the display to the display screen of client PC3.

[0111]The image data for a display is transmitted to client PC3 (S809), and the picture corresponding to ordering ID which transmitted is displayed on the display of client PC3 (S826).

[0112]A user chooses a desired picture out of the displayed picture (S827), and performs a print order (S828). The order content to input is performed like the print order in the image data upload device 2.

[0113]Like [when order data is received from client PC3 (S810)] the case where order data is received from the picture upload device 2, An order processing situation is changed into "finishing [order reception]" (S811), the image data and order data concerning the order concerned are related with ordering ID, are transmitted to the laboratory server 5, and it returns to a waiting state (S812).

[0114]When only the state which uploaded image data without performing an order continues, the center server 4 deletes image data in after-storing fixed time (for example, one month). Namely, when there is no access from client PC3 to the center server 4, It judges whether while the order processing situation had been "finishing [picture upload]", one month or more passed (S814), and when one month or more passes, processing which deletes image data from the image data area 401a is performed (S815).

[0115]On the other hand about the image data by which the print order was made. When it was made to be saved with the period (for example, for one year) and the center server 4 according to the contractual coverage and later has the hope of print-out for the second time from a user, since it is not necessary to follow again the upload procedure of image data mentioned above, it is desirable.

[0116]Although the center server 4 was used in this example as a storage place of the picture used for a print, The storage area of the center server 4 may be used only as a WWW server, and the image data used for a print in that case will be memorized by the laboratory server's 5 lab storage parts store 501.

[0117]Operation of the laboratory server 5 and the lab printer 51 in a lab is explained using drawing 9.

[0118]When the image data and order data which were matched with ordering ID from the center server 4 are received (S901), these are matched with ordering ID and stored in the image data area 501a of the lab storage parts store 501, and the order data field 501b one by one (S902).

[0119]In the order which received order data, print data are generated in the printing data production part 503 (S903). Based on the image data and order data corresponding to ordering ID in generation of print data, publicly known data expansion and signal processing are performed. When the template is specified with order data, merge with the template picture memorized by the well-known method in the contents area 501c is performed.

[0120]The generated print data are transmitted to the lab printer 51 via a network with order data (S904). If the lab printer 51 is received [print data] (S931), while performing image formation (print) in a record paper based on print data by the color printer part 513 (S932), image formation of the figures (for example, bar code etc.) corresponding to ordering ID or ordering ID is performed in the monochrome printer part 514 outside the record section of a record paper sheet rear side or a record paper (S933).

[0121]In a Label Printer (not shown), image formation based on ordering ID transmitted by the laboratory server 5 is performed to a label paper (S934). The contents which carry out image formation here are the processing date time etc. at the time of for example, ordering ID, personal information, order data, and a date of acceptance. The label paper by which image formation was carried out is stuck on the print output storage bag called DP bags.

[0122]The print output by which image formation was carried out by the color printer part 513. It will be stored and packed up with a baling machine by the DP bags on which the label paper corresponding to ordering ID was stuck, if ordering ID and order data which were read correspond after reading of the figure corresponding to ordering ID or this code is performed in the inspection section 517 (S935) (S936) (S937). If ordering ID and order data do not correspond by S936, a print output is discarded (S939) and returns to S932. If packing is completed, the signal of "an end of printing" will be emitted to the laboratory server 5 (S938), and processing of the lab printer 51 will be ended.

[0123]The laboratory server 5 which received the notice of "the end of printing" transmits the code which is equivalent to "printing completion" with ordering ID to (S905) and the center server 4 (S906). The center server 4 will change the order processing situation status corresponding to ordering ID into "printing completion", if this is received (S951) (S952).

[0124]If the packed-up print output (DP bags) is shipped from the lab 5 (S907), the laboratory server 5 will transmit ordering ID and the code equivalent to "finishing [dispatch]" to the center server 4 (S908), and will end processing.

[0125]If the print output (DP bags) packed up by the agency which the user specified at the time of the print order (S954) which changes the order processing situation status corresponding to (S953) and ordering ID "during delivery" arrives, the center server 3 which received "finishing [dispatch]", Ordering ID and the code equivalent to "finishing [delivery]" are transmitted from the information terminal (for example, POS register) of an agency to the center server 4 (S961), finishing [the center server 4 / "delivery of the order processing situation status corresponding to ordering ID]" -- changing (S955-S956) -- it transmits by E-mail and connects that the print output arrived at the agency to the customer (user who placed an order) (S957).

[0126]Although the connection to this user can also use means of communication, such as a telephone, in addition to an E-mail, If it is an E-mail, it can make for situation status to have changed to "finishing [delivery]" into a trigger, it can be connected automatically, and it can save labor, and also there is no fear of the leakage accident in connection at the time of passing people, and it is suitable.

[0127]A user receives a print output (DP bags) in an agency in exchange for ordering ID used at the time of picture upload. How for presentation of ordering ID to connect to the terminal (image data upload device 2) of a receipt store ordering ID memorized by the (1) digital camera 1, and refer to it, (2) Although there are a way the terminal of a receipt store reads and refers the memory card 8 in which ordering ID was written in, a method of displaying ordering ID on the liquid crystal display of the (3) digital camera 1, and referring to it, a way oral or a document refers (4) ordering ID, etc., From a viewpoint of mitigation of time and effort, and the prevention from a mistake at the time of passing people, although especially (1) or (2) are preferred, of course, these may be used together.

[0128]A sake [when not using ordering ID (for example when a digital camera can bring neither a camera nor a memory card to an agency with borrowing from a person)], Issuance of the IC card reception ID was remembered to be to the user in ordering ID by S603, When offer with gestalten, such as print-out to the predetermined paper of reception ID, a screen display to the indicator 204 of reception ID, and reception ID transmission to a cellular phone, is arranged in parallel and performed, the printed-out predetermined paper can also be checked now and it is more desirable.

[0129]When a user's print output receipt and the payment of a fee are completed, (S962), The code which is equivalent to a "transaction end" from the terminal of a receipt store with ordering ID to the center server 4 is transmitted (S963), The center server 4 changes the order processing situation status corresponding to ordering ID which received into a "transaction end" (S958-S959), and processing of all the print services of this invention completes it.

[0130]
[Effect of the Invention]Since the identification information matched with the image data which the imaging device photoed to the imaging device or the storage can be made to memorize according to the printing system and print service method of this invention, When receiving a print order, troublesome management of ID until it receives a print, a check, etc. becomes unnecessary, and a receptionist/processing of a print order become easy. An inspection and a print order become possible only by connecting to a client terminal the imaging device with which identification information was memorized, and a storage, and it comes to be able to perform an image data inspection and a print order easily in the case of the image data inspection which passed the Internet, for example.

[0131]Since the identification information matched with the image data which the imaging device photoed to the imaging device or the storage can be made to memorize according to the imaging device of this invention, When receiving a print order, troublesome management of ID until it receives a print, a check, etc. becomes unnecessary, and processing of a print order becomes easy.

[0132]Since the identification information matched with the image data which the imaging device photoed to the imaging device or the storage can be made to memorize according to the print acceptance processing device and the print acceptance processing method of this invention, When receiving a print order, troublesome management of ID until it receives a print, a check, etc. becomes unnecessary, and the managing acceptance of a print order becomes possible easily. An inspection and a print order become possible only by connecting to a client terminal the imaging device with which identification information was memorized, and a storage, and it comes to be able to perform an image data inspection and a print order easily in the case of the image data inspection which passed the Internet, for example.

[Translation done.]

TECHNICAL FIELD

[Field of the Invention]This invention relates to the printing system which can perform especially an order and reception of a print easily about the system for printing based on a print order.

[Translation done.]

PRIOR ART

[Description of the Prior Art]In recent years, the digital camera and the home digital printer have spread with remarkable vigor by improvement in an image processing technique. In connection with it, the consciousness over a digital image also increases and the user who is using it has also been used for various uses, such as homepage creation, a digital printed matter, etc. of the Internet. Naturally the service of the large lab etc. which, on the other hand, perform the service bureau and mini-laboratory (small-scale processing laboratory) which perform picture print service, and centralized processing which deals with digital image data is increasing, and it goes across the service variation variably.

[0003]As an example of service which deals with such digital image data, a customer uploads the image data of a negative film in the shop to the server currently exhibited on the Internet, Based on peculiar certification information, what can place an order for a request of an extra copy print, a mug with a picture, a T-shirt, etc. is known. A customer can receive offer of service also with those same to whom the inspection was permitted.

[0004]For example, in the Japanese-Patent-Application-No. No. 134124 [11 to] gazette. A picture is displayed as the read-out device which reads image data from the removable media which recorded image data based on the read image data, and the print order accepting device which has a touch type panel which chooses the picture which should be printed is indicated out of the displayed picture.

[0005]In JP,2000-112964,A. While transmitting the picture which identifies the operator who inputs a manuscript picture, checks the displaying condition of the manuscript picture inputted from an image input part by an indicator, and a user means to an offer-of-information server system and registering it, The offer-of-information terminal unit which updates automatically the hypertext information managed by a storage parts store so that search of the registered picture is possible is indicated.

[0006]Meaning user ID and password are published to a user at JP,2000-235642,A, The user area corresponding to user ID is gained to memory storage, a user judges whether it is a valid user according to user ID and a password, and the image processing system which allows only a valid user processing of the image data in the directory corresponding to user ID is indicated.

[Translation done.]

EFFECT OF THE INVENTION

[Effect of the Invention]Since the identification information matched with the image data which the imaging device photoed to the imaging device or the storage can be made to memorize according to the printing system and print service method of this invention, When receiving a print order, troublesome management of ID until it receives a print, a check, etc. becomes unnecessary, and a receptionist/processing of a print order become easy. An inspection and a print order become possible only by connecting to a client terminal the imaging device with which identification information was memorized, and a storage, and it comes to be able to perform an image data inspection and a print order easily in the case of the image data inspection which passed the Internet, for example.

[0131]Since the identification information matched with the image data which the imaging device photoed to the imaging device or the storage can be made to memorize according to the imaging device of this invention, When receiving a print order, troublesome management of ID until it receives a print, a check, etc. becomes unnecessary, and processing of a print order becomes easy.

[0132]Since the identification information matched with the image data which the imaging device photoed to the imaging device or the storage can be made to memorize according to the print acceptance processing device and the print acceptance processing method of this invention, When receiving a print order, troublesome management of ID until it receives a print, a check, etc. becomes unnecessary, and the managing acceptance of a print order becomes possible easily. An inspection and a print order become possible only by connecting to a client terminal the imaging device with which identification information was memorized, and a storage, and it comes to be able to perform an image data inspection and a print order easily in the case of the image data inspection which passed the Internet, for example.

[Translation done.]

TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention]In the above-mentioned service, publish a check at the time of print reception, or ordering ID is published, In order to receive a print in exchange for the check concerned or ordering ID or to access the server field which is keeping the self image data on the Internet, said ordering ID had to be inputted.

[0008]However, management of said ordering ID until it receives a print, or a check is troublesome, and he loses, or often forgot.

[0009]Then, an object of this invention is to provide the device/method used for the printing system and this which can perform more easily the print order of the picture picturized with the digital camera in view of the problem of this conventional technology.

[Translation done.]

MEANS

[Means for Solving the Problem]An imaging device with which the purpose of above-mentioned this invention carries out photograph recording of the picture information, and a printing tube Osamu device which manages printing of said picture information recorded with said imaging device, In a printing system with which network connection of the ** was carried out to a print acceptance processing device which transmits said picture information to said printing tube Osamu device, and a print processing system which prints based on directions from said printing tube Osamu device, While publishing identification information which identifies picture information which said imaging device photoed, said print acceptance processing device, Said identification information is stored in said imaging device, and it is attained by associating said picture information which received, and said identification information by printing system managing said printing.

[0011]An imaging device with which the above-mentioned purpose carries out photograph recording of the picture information and a printing tube Osamu device which manages printing of said picture information recorded with said imaging device, In a printing system with which network connection of the ** was carried out to a print acceptance processing device which transmits said picture information to said printing tube Osamu device, and a print processing system which prints based on directions from said printing tube Osamu device, While publishing identification information which identifies picture information which said imaging device photoed, said print acceptance processing device, Said identification information is stored in a storage which can be freely detached and attached to said imaging device, and it is attained by associating said picture information which received, and said identification information by printing system managing said printing.

[0012]An identification information reception means which the above-mentioned purpose carries out photograph recording of the picture information, and are other information processors and an imaging device which can be communicated, and receives identification information which other information processors relate with said picture information, and is published, It is attained by imaging device having a memory measure which memorizes said identification information, and a transmitting means which transmits said identification information to other information processors.

[0013]A picture information writing means which the above-mentioned purpose carries out photograph recording of the picture information, and is a removable imaging device about a storage and writes said picture information in said storage, Other information processors are attained by imaging device having an identification information reception means which receives identification information which is related with said picture information and published, a memory measure which memorizes said identification information, and an identification information writing means which writes said identification information in said storage.

[0014]A picture information reading means which the above-mentioned purpose is an imaging device and a print acceptance processing device which can be communicated which were connected with a network and memorized picture information, and reads picture information which said imaging device memorizes, An issuing means which relates with said read picture information and publishes identification information, It is attained by print acceptance processing device having an identification information transmitting means which transmits said identification information to said imaging device, and a transmitting means which transmits said picture information and said identification information via a network.

[0015]A picture information reading means which reads picture information which is a removable print acceptance processing device and was written in said storage in a storage with which the above-mentioned purpose is connected with a network, and picture information was written in, An issuing means which relates with said read picture information and publishes identification information, It is attained by print acceptance processing device having an identification information writing means which writes said identification information in said storage, and a transmitting means which transmits said picture information and said identification information via a network.

[0016]An imaging device with which the above-mentioned purpose carries out photograph recording of the picture information and a printing tube Osamu device which manages printing of said picture information recorded with said imaging device, A print acceptance processing device which transmits said picture information to said printing tube Osamu device, In a print service method in a system by which network connection of the ** was carried out to a print processing system which prints based on directions from said printing tube Osamu device; In a process of transmitting said picture information which carried out photograph recording with said imaging device, and identification information which is related with said picture information and published to said printing tube Osamu device in said print acceptance processing device, and said printing tube Osamu device, When a process of memorizing said transmitted picture information and said identification information, and a print order which contains said identification information in said printing tube Osamu device have been transmitted, It is attained by a print service method including a process of transmitting picture information corresponding to said identification information to said print processing system.

[0017]A process of reading and memorizing picture information which the above-mentioned purpose is a print service method which performs image formation based on picture information recorded with an imaging device, and was photoed with said imaging device, A process of relating with said picture information and publishing identification information, and a process of writing said identification information in a storage which can be freely detached and attached to an imaging device or an imaging device, A process of reading said identification information from said imaging device or said storage, A process of reading picture information which is related with said read identification information and is memorized, A process of choosing arbitrary picture information out of said read picture information, A process of inputting a print order of said selected picture information, and a process of generating ordering information related with said identification information based on said inputted print order, It is attained by a print service method including a process of performing image formation based on said picture information and said ordering information on a recording medium, and a process of printing a picture corresponding on said recording medium at said individual information or said identification information.

[0018]A process of reading picture information which the above-mentioned purpose is the print acceptance processing method in an imaging device and an acceptance processing device which can be communicated which are connected with a network and memorized picture information, and said imaging device memorizes, It is attained by a print acceptance processing method including a process of relating with said picture information and publishing identification information, a process of transmitting said identification information to said imaging device, and a process of transmitting said read picture information and identification information via a network.

[0019]A process of reading picture information which the above-mentioned purpose is the print acceptance processing method [in / for a storage with which it is connected with a network and picture information was written in / a removable image information processing unit], and was written in said storage, It is attained by a print acceptance processing method including a process of relating with said picture information and publishing identification information, a process of writing said identification information in said storage, and a process of transmitting said picture information and said identification information via a network.

[0020]

[Embodiment of the Invention]Hereafter, this invention is explained with reference to an embodiment.

[0021]Drawing 1 is a network service system **** figure containing the printing system concerning this embodiment.

[0022]The client side terminals (client PC) 3, the print acceptance processing device (image data upload device) 2, the center server 4, and the laboratory server 5 are connected to network WAN, such as the Internet. In the lab, the laboratory server 5 is connected to the image forming device 51 via LAN etc. The digital camera 1 is connected with the client side terminals (client PC) 3 or the image data upload device 2.

[0023]Drawing 2 is a functional block diagram of the digital camera 1 concerning the imaging device of this invention.

[0024]The digital camera 1 is provided with the identification information storage parts store 101, the final controlling element 102, card I/F103, I/F104 for communication, USB connector 105, the power supply 106, the whole control part 107, the signal processing part 108, the indicator 109, the image pick-up part 110, ROM111, and RAM112, The memory card 8 (a removable media may be called hereafter) has removable composition. The digital camera 1 makes image data the picture picturized in the image pick-up part 110 by this composition, After carrying out signal processing in the signal processing part 108, processed image data is written in the memory card 8, The image data memorized by the memory card 8 is read, it displays on the indicator 109, the image data memorized by the memory card 8 and ordering ID (identification information) memorized by the identification information storage parts store 101 are read, and it has a function of transmitting to client PC3 via I/F for communication.

[0025]The identification information storage parts store 101 which memorizes ordering ID is an un-volatilizing type storage which memorizes ordering ID for identifying the order received which constitutes and mentions an identification information storage means later in this invention.

[0026]In the identification information storage parts store 101, as for memorizable ordering ID, it does not restrict but one can memorize two or more ordering ID. That is, when an ordering ID change flag other than ordering ID is memorized in the identification information storage parts store 101 and 2nd ordering ID is received, an ordering ID·change flag is changed into 2nd ordering ID, and it is made to memorize in the identification information part 101. And a user performs operation of changing an ordering ID change flag, looking at the display of the indicator 109, and it becomes possible to switch so that it may choose which [of 1st and 2nd ordering ID] is used. Under the present circumstances, the final controlling element 102 which performs operation for selection of ordering ID acts as an identification information switching means.

[0027]By doing in this way, even when the user has uploaded two or more image data, Ordering ID can be switched based on an ordering ID change flag, and the image data (it does not restrict in one sheet but there is also a case of two or more data) of the request matched with ordering ID can be specified. Three or more may be sufficient as the number of memorizable ordering ID.

[0028]In this invention, the identification information storage parts store 101 can incorporate ordering ID into image data, and not indispensable composition but can not necessarily memorize it so that it may mention later.

[0029]The final controlling element 102 is a switch group or a touch panel concerning operation of digital cameras, such as an electric power switch, a shutter button, a flash mode configuration switch, an imaging mode configuration switch, photography / reproduction mode configuration switch, etc.

[0030]Card I/F103 equivalent to the picture information writing means of this invention and an identification information writing means is an interface for performing writing/read-out of the image data to the removable memory card 8, the writing of ordering ID, and writing/read-out of attached data to the digital camera 1.

[0031]The memory card 8 which is a removable storage to the digital camera 1. It is a memory for storing image data, ordering ID, various attached data, etc. by the file format, and comprises a flash memory represented with this example by CompactFlash, SmartMedia, an SD card, and the stick memory.

[0032]Although the writing of DPOF data is performed to the memory card 8 from card I/F103, in DPOF1.10 standard, it is also possible in this case to record ordering ID on "VendorUnique" of a job description part. About DPOF, Canon, Inc. and Eastman Kodak Co., Fuji Photo Film Co., Ltd. It is indicated to the reference works (http://www.panasonic.co.jp/avc/video/dpof/dpof_110/white.htm) about DPOF Version 1.10 which four companies of D POF proposals of Matsushita Electric Industrial Co., Ltd. announced.

[0033]The transmitting means and reception means in this invention are an interface based on the publicly known standard for communicating with client PC3, for example, RS232C, IEEE1394, USB, IrDA, Bluetooth, etc. are mentioned.

[0034]In this example, USB connector 105 based on a USB standard is used as a transmitting means, a reception means, and a receiving means, In addition to the signal wire of I/F104 for communication, it is connected to the power supply 106 and electric power is supplied to a power source line from the power supply 106 in each circuit which contains communication I/F104 and the whole control part 107 at least. Transmission of image data or ordering ID is [as opposed to / in the state of OFF of the power supply of the digital camera 1 / client PC3 or the image data upload device 2] possible by doing in this way at the electric supply from client PC3 or the image data upload device 2.

[0035]The whole control part 107 which is a control means in this invention performs various control based on the control program in ROM111. Into these control, the photographing picture signal outputted from the signal processing part 108 is read, The processing which transmits to RAM112, the processing which transmits data to the indicator 109 from RAM112 similarly and the processing which transmits image data to card I/F103 by a file format, and the processing which transmits ordering ID memorized by the identification information storage parts store 101 to communication I/F are included.

[0036]The signal processing part 108 does the A/D conversion of the outputted electrical signal, and performs image processing, such as a gamma correction, a color space conversion, and a white balance, for the digitized signal further.

[0037]The image pick-up part 110 consists of a lens, an optoelectric transducer, a stroboscope (not shown), etc., optoelectric transducers, such as CCD, change into an electrical signal the picture projected with the lens, and a stroboscope emits light corresponding to the directions from a whole control part.

[0038]The indicator 109 which is a displaying means of this invention A liquid crystal display element, a plasma display, Or it is possible to use CRT, and a picture, and a text and the inputted Image from an image pick-up part are displayed, or the menu indication for various conditioning, the display of ordering ID memorized by the identification information storage parts store 101, etc. are performed.

[0039]ROM111 has memorized the control program for a whole control part to perform various control of the digital camera 1.

[0040]RAM112 stores the photographed image data transmitted from the signal processing part 108, It is used in order to perform directed image processing, to store temporarily the compressed image data read from the memory card 8, to be used as a work area for graphical-data-compression processing and thawing treatment or to evacuate various data temporarily.

[0041]The whole control part 107 is operation from the final controlling element 102, and it is also possible to regulate transmission and the writing to a storage arbitrarily to other information processors of ordering ID. For example, if an ordering ID valid flag is memorized with ordering ID to use ordering ID, ordering ID can be made into an invalid state by setting the flag which shows invalidity. In the case where the user who receives a print order as an example borrows others' digital camera 1 temporarily etc., it cannot be overemphasized that it enables a print order person to receive print service, without caring about ordering ID. At this time, the final controlling element 102 which performs operation about transmission of ordering ID or regulation of writing acts as a transmission switching means or a write-in switching means.

[0042]It may be made to add ordering ID to the Exif tag of image data stored temporarily. About an Exif tag. Japan Electronic Industry Development Association standard (JAPANELECTRONIC.) INDUSTRY DEVELOPMENT. ASSOCIATION. "ATANDARD Digital Still Camera Image File Format Standard(Exchangeable image file format for Digital Still Camera:Exif. It is indicated in detail in the paragraph of "2.6. Tags" of Version" (2.1JEIDA-49-1998).

[0043]Drawing 3 is a functional block diagram of the picture upload device 2 concerning the print acceptance processing device of this invention, and performs acceptance processing of a print order, etc.

[0044]The picture upload device 2 is provided with the control section 201, the memory 202, the hard disk (HDD) 203, the indicator 204, the final controlling element

205, the input interface 209, the network interface 208, order reception ID issuing part 207, and the card reader 206.

[0045]The input interface 209 which are a picture information reading means of this invention, and an identification information reading means, It has two or more storage acceptance openings or connectors, and storage read stations so that the various storages with which the picture information corresponding to the picture picturized with the digital camera 1 is written in can be received freely. As a storage reading mechanism, for example, magnetic disk drives, such as FD and HiFD, Optical disk drives, such as MD, CD-R, CD-RW, and DVD, SmartMedia (SSFDC), CompactFlash, a memory stick, There are wireless interfaces including cable connection I/F including card I/F corresponding to memory cards including an SD card, USB, and IEEE1394, infrared rays (IrDA), and Bluetooth, etc. There are TIFF, GIF, JPEG, FlashPix, Exif, etc. as a format of a digital image.

[0046]The network interface 208 which are a transmitting means of this invention and a reception means is a communication interface for performing transfer of other information processors and data, and is connected to network WAN, such as the Internet, by the publicly known method.

[0047]The control section 201 controls the picture upload device 2 whole according to the control program memorized by memory 202 or HDD203. For example, the picture information inputted from the media input interface 209 is read, The processing which transmits to HDD203, the processing which associates the picture information for which data is similarly transmitted to the indicator 204 from HDD203, and which was processed and inputted, and ordering ID, and the processing which relates with ordering ID the order inputted from the final controlling element 205, and is processed into order data are included.

[0048]The hard disk (HDD) 203 memorizes the application program which the control section 201 can execute, or memorizes temporarily the image data and order data which were inputted from the media input interface 209.

[0049]The indicator 204 comprises a liquid crystal display element and a CRT display, displays the picture information transmitted from HDD203, or performs order inputted from the final controlling element 205, and presenting of personal information.

[0050]The final controlling element 205 equivalent to the picture selection inputting means of this invention and an order input means comprises a keyboard, a touch panel, a joy stick controller, etc., and performs an order and the input of personal information.

[0051]The card reader 206 is provided with the magnetic-recording reader, the optical reader, and the IC card reader, and reads the membership information currently beforehand recorded on the membership card 9.

[0052]Order reception ID issuing part 207 publishes ordering ID which is the identification information for matching the image data inputted from the media input interface 209, an order content, and personal information per order. An order reception ID issuing part constitutes the issuing means of the identification information of this invention.

[0053]Drawing 4 is a functional block diagram of the center server concerning the printing tube Osamu device of this invention.

[0054]The center server 4 The image data area 401a, the customer data field 401b, It has provided with contents area 401c and 401 d of order progress data areas center storage portion 401, authentication section 402, control-section 403, WWW-data generation part 404, network interface 405, and ROM406. It has a function as what is called a World-Wide-Web (WWW) server.

[0055]It memorizes in the image data area 401a which is a picture information memory measure of this invention by the file format which matched with ordering ID the image data transmitted from the image data upload device 2.

[0056]In the customer data field 401b which is an individual information storage means. It was inputted from image data upload device 2 or client PC3, and personal information, such as a name of the customer transmitted via the network, an address, a telephone number, and an order history, is memorized by the file format matched with ordering ID.

[0057]In the contents area 401c, the information, including a template picture, a contribution text, store information, etc., provided by WWW is memorized by the file format.

[0058]The advancing situation of the printer order processing based on the order data transmitted by the customer is coded, and it is matched with ordering ID by 401d of order progress data areas which are a print order progress information memory measure of this invention, and memorizes in them.

[0059]The authentication section 402 which are a comparison means of this invention and an access-restriction means, Ordering ID transmitted from other information processing terminals including client PC3 via the network and the information memorized to the customer data field 401b are contrasted, and access to the various data memorized by the center storage portion 401 by other information processing terminals is recognized or refused.

[0060]The control section 403 controls the center server 4 whole according to the control program memorized by ROM406. For example, the processing which transmits the picture information inputted from network I/F405 to the image data area 401a, The processing which transmits image data to the laboratory server 5 via a network via network I/F405 from the image data area 401a similarly, The processing which updates the information included in 401 d of order progress data areas based on the received order progress information, The processing which transmits the received order data to the laboratory server 5 via a network via network I/F, and the processing which relates with ordering ID the order inputted from the final controlling element 205, and is processed into order data are included.

[0061]The WWW-data generation part 404 which is an image information generating means for a display of this invention generates the data which suited WWW based on the variety of information memorized by the center storage portion 401.

[0062]The identification information reception means of this invention, a picture information reception means, an access ID reception means, The network interface 405 equivalent to the picture information transmitting means for a display, a personal information reception means, a print order reception means, and a print order processing situation transmitting means, The image data memorized in the order data generated by the WWW data which received the various data transmitted via a network, and were generated by the WWW-data generation part 404, or the control section 406, or the image data area 401a is transmitted.

[0063]Drawing 5 is a functional block diagram of the laboratory server 5 and the lab printer 51 concerning the print processing system of this invention. The laboratory server 5 The image data area 501a, the order data field 501b, It has the lab storage parts store 501 provided with the contents area 501c, the control section 502, the printing data production part 503, the network interface 504, ROM505, and the video interface 506, It has a function as a printer server of what is called image processing and the lab printer 51. The lab printer 51 is provided with the control section 510, ROM511, the memory 512, the color printer part 513, the monochrome printer part 514, the video interface 515, the aftertreatment apparatus 516, and the inspection section 517, and has a function as a printer.

[0064]The image data transmitted to the image data area 501a from the center server is memorized by the file format matched with ordering ID.

[0065]The order data transmitted to the order data field 501b from the center server is memorized by the file format matched with ordering ID.

[0066]The picture by which a template picture, invoice form, etc. are compounded by the contents area 501c with the image data memorized in the image data area 501a, and printing offer is made with a lab printer is memorized by the file format.

[0067]The control section 502 controls the laboratory server 5 whole according to the control program memorized by ROM505. For example, the processing which transmits the picture information inputted from network I/F504 to the printing data production part 503, The processing which transmits the video signal generated by the printing data production part 503 to the lab printer 51 via the video interface 506, The processing which transmits order progress information to the center server 4 by network I/F504 course, and the processing which transmits the control signal which controls the lab printer 51 via the video interface 506 are included.

[0068]The printing data production part 503 performs various publicly known image processing based on picture information and other information, and generates the print data (video signal) which suited the lab printer 51.

[0069]The network interface 504 receives the various data transmitted via a network, and transmits an order advancing situation to the center server 4.

[0070]The video interface 506 receives the control signal which transmitted the print data generated by the printing data production part 503 to the lab printer 51, and was transmitted from the lab printer.

[0071]The control section 510 of the lab printer 51 controls the lab printer 51 according to the control program memorized by ROM511. For example, the processing which transmits the print data inputted from video I/F515 to the color printer part 513 or the monochrome printer part 514, The processing which controls the aftertreatment apparatus 516 based on the information detected in the inspection section 517, The processing which controls the color printer part 513 or the monochrome printer part 514 based on the control commands transmitted by the laboratory server 51, and the processing which transmits control commands via the video interface 515 to a laboratory server are included.

[0072]The memory 512 memorizes temporarily the print data transmitted via the video interface 515.

[0073]The color printer part 513 equivalent to the 1st image forming means of this invention is a printer which carries out color image formation of the picture picturized with the digital camera 1 on the recording form based on the print data transmitted via the video interface 515 from the laboratory server 5.

[0074]Based on the print data transmitted via the video interface 515 from the laboratory server 5, the monochrome printer part 514 equivalent to the 2nd image forming means of this invention, It is a printer which carries out monochrome image formation of the character or figure equivalent to ordering ID or ordering ID related with said image data to the rear face of said recording form, or the non recording part of said color picture. Image formation of ordering ID is carried out with the gestalt of a character or a bar code.

[0075]The color printer part 513 and the image formation method of the monochrome printer 514 may be which methods of a film photo method, an electrophotographying system, an inkjet method, and a thermal method.

[0076]The inspection section 517 equivalent to the individual-identification-information detection means of this invention inspects whether the print output by which read ordering ID formed in the record paper by the photo sensor etc., and image formation was carried out to the print order with the lab printer 51 corresponds.

[0077]The aftertreatment apparatus 516 which is the recording medium processing of this invention performs sorting of a recording form [finishing / image formation], rearrangement, union for every print order, and packing according to control of the control section 510. For example, the device written in the application-for-patent No. 77893 [2000 to] application specification can be used.

[0078]Although the laboratory server 5 which indicated here, the center server 4, and the lab printer 51 are separated functionally, you may be one place or one device physically.

[0079]Operation of the picture upload device 2 concerning this embodiment is explained with reference to drawing 6. The picture upload device 2 concerning this embodiment is installed in a print agency, a convenience store (an agency is called hereafter), etc.

[0080]The customer who asks for a print brings to an agency a removable media or the digital cameras 1 including the memory card 8 which recorded the image data corresponding to the picture picturized with the self digital camera 1.

[0081]Directions of upload of image data will express the screen which requires selection of the input method of image data as the picture upload device with which the initial screen is displayed. In this embodiment. [whether a removable removable media is inserted in the digital camera of this invention, and] Selection (media selection), a removable media, or data read (media reading) from a digital camera is performed for whether it is the data transfer from the digital camera of this invention (S601).

[0082]This media selection of S601 and media reading are explained with reference to drawing 7.

[0083]A user performs the selection input of media (S701).

[0084]When the data transfer from a digital camera is chosen by S702 (this embodiment explains USB to an example), USB connector 105 of the digital camera 1 is connected to the media input interface 209 of the picture upload device 2 (S721). When it has a wireless communication unit, the operation start of the wireless communication unit is carried out.

[0085]If a sensor detects and preparation of data communications is completed (S703), having been connected with the digital camera, A picture upload device starts the setup transaction which transmits the control signal specified by the standard to a digital camera, and requires transmission of a device configuration from the digital camera 1 (S704). The digital camera 1 performs the yne transaction which transmits the signal corresponding to a control signal, and transmits the device configuration which identifies the apparatus characteristic of the digital camera 1 (S722). If a device configuration is received (S705), the Request to Send of the image data continuously written in the memory card 8 of the digital camera 1 from the picture upload device 2 to the digital camera 1 will be performed (S706). Corresponding to it, the digital camera 1 transmits image data (S723), and the received image data (S707) is stored temporarily HDD203 (S708). Repeat S723, S724 and S707, and S708 until all the image data written in the memory card 8 is transmitted hereafter, and the digital camera 1, If it finishes transmitting all the image data, an EOF (End of file) signal will be transmitted to the picture upload device 2, and operation will be ended (S725). The picture upload device 2 which received the EOF signal ends media reading processing, and returns to a main routine (S709).

[0086]On the other hand, when insertion of a removable media is chosen by S701, it waits to insert a removable media in the opening of a picture upload device (S711).

[0087]If a sensor detects that the removable media was fixed to the position which can read image data, the media input interface 209 will read the data recorded on the removable media (S712). If what (S713) image data is stored temporarily for HDD203 is repeated and all the image data is read, media reading processing will be ended and it will return to a main routine (S714).

[0088]If it returns to a main routine, order reception ID issuing part 207 will publish uniquely peculiar order reception ID (ordering ID) (S602), and ordering ID will be transmitted to the camera 1 connected to the picture upload device 2 (S603). When the removable media is chosen by S701, transmission of S603 is transmitted to the removable media connected.

[0089]Reception of ordering ID of the digital camera 1 or the removable media 8 connected to the picture upload device 2 will memorize ordering ID (S622). (S621) In the case of a digital camera, ordering ID is memorized by the identification information storage parts store 101. Or when not providing an identification information storage parts store, it may be made to remember that it mentioned above to the tag of Exif of image data. In the case of a removable media, it may be in the predetermined field in a removable media, and may be made to memorize to "Vendor Unique" of the job description part based on the DPOF standard mentioned above.

[0090]All the pictures corresponding to the image data read by S601 are displayed on the screen of the indicator 204 in index (S604). A removable media or a digital camera is received at the same picture, When full-sized image data and the thumbnail image data whose data volume is smaller than full-sized image data are recorded, in this index display, a picture will be displayed based on thumbnail image data. When image data with small data volume is not memorized, from the read full-sized image data, image data with small data volume is generated, and it may be made to carry out an index display.

[0091]Although the user can judge whether a print order is performed in this stage and a result can also be inputted (S605), it is also possible for a user to only register image data and for it to be made to perform a actual print order behind in this stage. Thus, if you set, it is convenient when placing an order by package, after only uploading, for example about image data like a set photograph, exhibiting image data and collecting a purchasing applicant.

[0092]When carrying out a print order in this stage, a user chooses a desired picture out of the displayed picture (S606), and performs a print order (S607). Specification of the service kind whether an order content is the information about the receipt of the done print, i.e., a usual print or postcard print, In a postcard print, specification of the existence of specification of the kind of postcard, the variety of a print paper, print size, print number of sheets, marginal width, and gloss, etc. is inputted from the final controlling element 205, and the inputted order content is stored temporarily in the memory 202 as order data.

[0093]In addition, the kind of image processing performed to image data is also described. As a kind of image processing, there are monochrome finishing, sepia finishing, bloodshot-eyes amendment finishing, trimming, etc., for example.

[0094]For mischievous prevention of uploading the picture which does not have the volition of a print order from the start in large quantities, When the print number of sheets ordered in S608 exceeds constant value, or when the number of the image data read by S609 exceeds constant value, the input of a user's personal information is required (S610). The items which need an input are a name, an address, a telephone number, etc. The inputted personal information is stored temporarily in the memory

202.

[0095]The image data stored temporarily HDD203 is matched with ordering ID (S611). When personal information and order data are inputted by the final controlling element 205, these are also matched together and are transmitted to the center server 3 via the Internet (S612).

[0096]As an example of matching, consider it as the name which used ordering ID as a file name of image data or order data, for example, or, Or the tabular format file which may attain by considering it as the name which used ordering ID as a directory name containing image data or order data, and also shows the correspondence relation between a file name and ordering ID is created separately, and it may be made for this tabular format file to also transmit together.

[0097]With the name using ordering ID, if an ordering ID simple substance is made into a file name (for example, form of "ordering ID.jpg"), or a directory name, here, Since only one is matched in a picture or a directory to one ordering ID, The thing which enabled it to correspond to two or more unique files using ordering ID is said, As an example, it is "ordering ID+ photographing time .jpg", "ordering ID+ time received .prg", "ordering ID+ order consecutive numbers", etc., and it is desirable by adding to ordering ID to add the value which can be made into a unique name, and a numerical value.

[0098]The ordering information matched on this occasion comprises a form based on the DPOF standard mentioned above.

[0099]On the other hand, the center server which has a communication function, If a data transfer is completed (S631-S632), via the Internet, The image data upload device 2 (S613) which transmitted that the data transfer was performed to the image data upload device 2 of the agency (incoming call notice) (S633), and received the incoming call notice, A removable media is discharged, or communication with a digital camera is ended, and it displays on the indicator 204 that transmission of image data was completed.

[0100]Operation of the center server concerning this embodiment and client PC is explained with reference to drawing 8.

[0101]When there is transmission of data from the image data upload device 2, (S801), transmitted ordering ID, and the image data, personal information and order data which are matched with this are memorized by the center storage portion 401 (S802).

[0102]And judgment whether the image data upload device 2 performed the print order, Namely, when it judges whether order data was transmitted from the image data upload device 2 (S803) and order data is not transmitted, Memory of image data is interlocked with, the order processing situation which was matched with ordering ID by 401 d of order progress data areas, and was automatically generated is made "finishing [picture upload]" (S804), and it shifts to the connection waiting from a user (S805). The user who did not order a print by the above-mentioned S605 can order a print here. When an order is already placed (i.e., when order data is transmitted), It progresses to S811.

[0103]Although the user can go to an agency, can input ordering ID again and can also do a print order from an uploaded picture, he can also perform a print order via the Internet from client PC3.

[0104]When performing a print order via the Internet from client PC3, a user, It connects with the center server of the universal resource locator (URL) beforehand defined using the web browser etc. from client PC3 via the Internet (S821), and ordering ID is inputted.

[0105]The input (S829) from a keyboard is possible for the input of ordering ID, and it is also possible to input the removable memory card 8 automatically into the digital camera 1 of this invention or the digital camera of this invention by connecting with client PC3.

[0106]If the digital camera 1 of this invention is connected (S822), the plug-in application beforehand stored in the memory measure of client PC3 will start, and communication with the digital camera 1 will be started.

[0107]A sensor detects having been connected with the digital camera 1, and client PC3 performs the setup transaction which transmits the control signal specified by USB2.0 standard to the digital camera 1, and it requires ordering ID (S823). The digital camera 1 performs the yne transaction which transmits the signal corresponding to a control signal, and reads ordering ID memorized to the identification information storage parts store 101 or the memory card 8, and transmits (S831). It is received by client PC3 and transmitted ordering ID is stored temporarily in a memory (S824).

[0108]At this time, the power supply of the digital camera 1 does not need to be switched on and the above-mentioned transaction is performed only with the electric power supplied from client PC3 via a USB connector. The same operation is possible also when it has a connecting means of an IEEE1394 standard.

[0109]When connecting a removable memory card to the digital camera 1 client PC3 (not shown), if a sensor detects having inserted the memory card in the card reader, The plug-in application beforehand stored in the memory measure of client PC3 starts, and the signal which can be read is transmitted. Following this signal that can be read, a card reader reads ordering ID recorded on the memory card, and stores it temporarily in a memory.

[0110]Ordering ID stored temporarily in the memory is transmitted to a center server like the case where it is inputted from a keyboard. (S825) The center server 4 which received ordering ID is searched to the image data corresponding to ordering ID which received out of the image data stored in (S807) and the image data area 401a, and generates the image data for a display based on this (S808). With the image data for a display, it comprises a graphics file linked to HyperText Markup Language (HTML) and the HTML concerned, A graphics file reduces the resolution of the original image data memorized in the image data area 401a, and image size, and is changed suitably for the display to the display screen of client PC3.

[0111]The image data for a display is transmitted to client PC3 (S809), and the picture corresponding to ordering ID which transmitted is displayed on the display of client PC3 (S826).

[0112]A user chooses a desired picture out of the displayed picture (S827), and performs a print order (S828). The order content to input is performed like the print order in the image data upload device 2.

[0113]Like [when order data is received from client PC3 (S810)] the case where order data is received from the picture upload device 2, An order processing situation is changed into "finishing [order reception]" (S811), the image data and order data concerning the order concerned are related with ordering ID, are transmitted to the laboratory server 5, and it returns to a waiting state (S812).

[0114]When only the state which uploaded image data without performing an order continues, the center server 4 deletes image data in after-storing fixed time (for example, one month). Namely, when there is no access from client PC3 to the center server 4, It judges whether while the order processing situation had been "finishing [picture upload]", one month or more passed (S814), and when one month or more passes, processing which deletes image data from the image data area 401a is performed (S815).

[0115]On the other hand about the image data by which the print order was made. When it was made to be saved with the period (for example, for one year) and the center server 4 according to the contractual coverage and later has the hope of print-out for the second time from a user, since it is not necessary to follow again the upload procedure of image data mentioned above, it is desirable.

[0116]Although the center server 4 was used in this example as a storage place of the picture used for a print, The storage area of the center server 4 may be used only as a WWW server, and the image data used for a print in that case will be memorized by the laboratory server's 5 lab storage parts store 501.

[0117]Operation of the laboratory server 5 and the lab printer 51 in a lab is explained using drawing 9.

[0118]When the image data and order data which were matched with ordering ID from the center server 4 are received (S901), these are matched with ordering ID and stored in the image data area 501a of the lab storage parts store 501, and the order data field 501b one by one (S902).

[0119]In the order which received order data, print data are generated in the printing data production part 503 (S903). Based on the image data and order data corresponding to ordering ID in generation of print data, publicly known data expansion and signal processing are performed. When the template is specified with order data, merge with the template picture memorized by the well-known method in the contents area 501c is performed.

[0120]The generated print data are transmitted to the lab printer 51 via a network with order data (S904). If the lab printer 51 is received [print data] (S931), while performing image formation (print) in a record paper based on print data by the color printer part 513 (S932), Image formation of the figures (for example, bar code etc.) corresponding to ordering ID or ordering ID is performed in the monochrome printer part 514 outside the record section of a record paper sheet rear side or a record paper (S933).

[0121]In a Label Printer (not shown), image formation based on ordering ID transmitted by the laboratory server 5 is performed to a label paper (S934). The contents which carry out image formation here are the processing date time etc. at the time of for example, ordering ID, personal information, order data, and a date of acceptance. The label paper by which image formation was carried out is stuck on the print output storage bag called DP bags.

[0122]The print output by which image formation was carried out by the color printer part 513, It will be stored and packed up with a baling machine by the DP bags on which the label paper corresponding to ordering ID was stuck, if ordering ID and order data which were read correspond after reading of the figure corresponding to ordering ID or this code is performed in the inspection section 517 (S935) (S936) (S937). If ordering ID and order data do not correspond by S936, a print output is discarded (S939) and returns to S932. If packing is completed, the signal of "an end of printing" will be emitted to the laboratory server 5 (S938), and processing of the lab printer 51 will be ended.

[0123]The laboratory server 5 which received the notice of "the end of printing" transmits the code which is equivalent to "printing completion" with ordering ID to (S905) and the center server 4 (S906). The center server 4 will change the order processing situation status corresponding to ordering ID into "printing completion", if this is received (S951) (S952).

[0124]If the packed-up print output (DP bags) is shipped from the lab 5 (S907), the laboratory server 5 will transmit ordering ID and the code equivalent to "finishing [dispatch]" to the center server 4 (S908), and will end processing.

[0125]If the print output (DP bags) packed up by the agency which the user specified at the time of the print order (S954) which changes the order processing situation status corresponding to (S953) and ordering ID "during delivery" arrives, the center server 3 which received "finishing [dispatch]", Ordering ID and the code equivalent to "finishing [delivery]" are transmitted from the information terminal (for example, POS register) of an agency to the center server 4 (S961), finishing [the center server 4 / "delivery of the order processing situation status corresponding to ordering ID]" -- changing (S955-S956) -- it transmits by E-mail and connects that the print output arrived at the agency to the customer (user who placed an order) (S957).

[0126]Although the connection to this user can also use means of communication, such as a telephone, in addition to an E-mail, If it is an E-mail, it can make for situation status to have changed to "finishing [delivery]" into a trigger, it can be connected automatically, and it can save labor, and also there is no fear of the leakage accident in connection at the time of passing people, and it is suitable.

[0127]A user receives a print output (DP bags) in an agency in exchange for ordering ID used at the time of picture upload. How for presentation of ordering ID to connect to the terminal (image data upload device 2) of a receipt store ordering ID memorized by the (1) digital camera 1, and refer to it, (2) Although there are a way the terminal of a receipt store reads and refers the memory card 8 in which ordering ID was written in, a method of displaying ordering ID on the liquid crystal display of the (3) digital camera 1, and referring to it, a way oral or a document refers (4) ordering ID, etc., From a viewpoint of mitigation of time and effort, and the prevention from a mistake at the time of passing people, although especially (1) or (2) are preferred, of course, these may be used together.

[0128]A sake [when not using ordering ID (for example when a digital camera can bring neither a camera nor a memory card to an agency with borrowing from a person)], Issuance of the IC card reception ID was remembered to be to the user in ordering ID by S603, When offer with gestalten, such as print-out to the predetermined paper of reception ID, a screen display to the indicator 204 of reception ID, and reception ID transmission to a cellular phone, is arranged in parallel and performed, the printed-out predetermined paper can also be checked now and it is more desirable.

[0129]When a user's print output receipt and the payment of a fee are completed, (S962), The code which is equivalent to a "transaction end" from the terminal of a receipt store with ordering ID to the center server 4 is transmitted (S963), The center server 4 changes the order processing situation status corresponding to ordering ID which received into a "transaction end" (S958-S959), and processing of all the print services of this invention completes it.

[Translation done.]

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1]It is a mimetic diagram showing the print making system of this embodiment.

[Drawing 2]It is a functional block diagram showing the digital camera concerning this embodiment.

[Drawing 3]It is a functional block diagram showing the image data upload device concerning this embodiment.

[Drawing 4]It is a functional block diagram showing the center server device concerning this embodiment.

[Drawing 5]It is a functional block diagram showing the laboratory server device and lab printer concerning this embodiment.

[Drawing 6]It is a flow chart showing main routine operation of the image data upload device concerning this embodiment.

[Drawing 7]It is a flow chart showing the subroutine operation of an image data upload device and the operation of a digital camera concerning this embodiment.

[Drawing 8]It is a flow chart showing operation of the center server device concerning this embodiment.

[Drawing 9]It is a flow chart showing operation of the laboratory server device concerning this embodiment, a lab printer, and a center server device.

[Description of Notations]

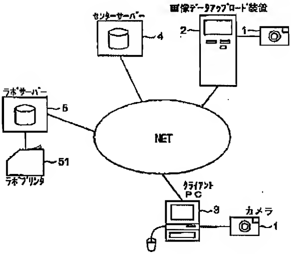
1 Digital camera

2 Image data upload device
3 Client PC
4 Center server
5 Laboratory server
51 Lab printer
8 Memory card

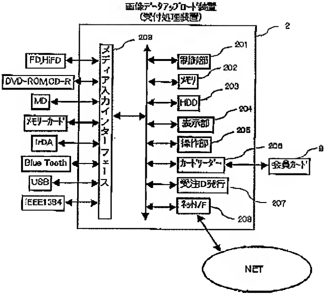
[Translation done.]

DRAWINGS

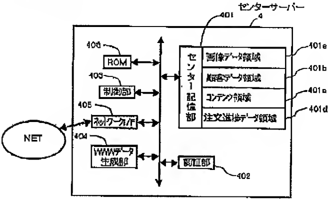
[Drawing 1]


ｾﾝﾀｰｻｰﾊﾞｰ
4
画像ﾃﾞｰﾀｱｯﾌﾟﾛｰﾄﾞ装置
2
1
ﾗﾎﾞｻｰﾊﾞｰ
5
NET
51
ﾗﾎﾞﾌﾟﾘﾝﾀ
ｸﾗｲｱﾝﾄ
PC
3
カメラ
1

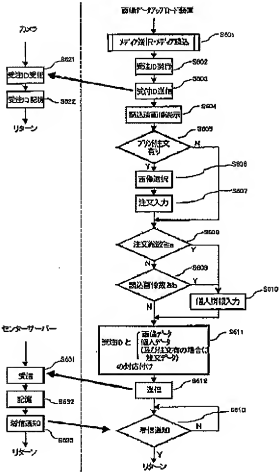
[Drawing 3]


画像データアップロード装置
(受付処理装置)
2
209
メディア入力インターフェース
FD,HiFD
DVD-ROM,CD-R
MD
メモリーカード
IrDA
Blue Tooth
USB
IEEE1394
201
制御部
202
メモリ
203
HDD
204
表示部
205
操作部
206
カードリーダー
9
会員カード
受注ID発行
207
ネットI/F
208
NET

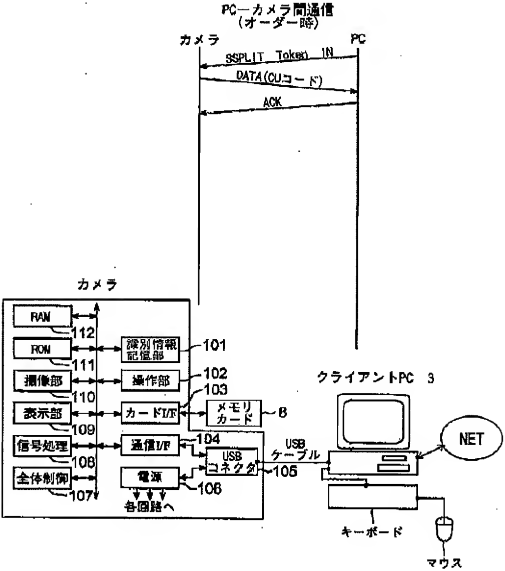
[Drawing 4]


センターサーバー
4
401
センター記憶部
画像データ領域
401a
顧客データ領域
401b
コンテンツ領域
401c
注文送付データ領域
401d
406
ROM
403
制御部
405
ネットワークI/F
NET
404
WWWデータ生成部
認証部
402

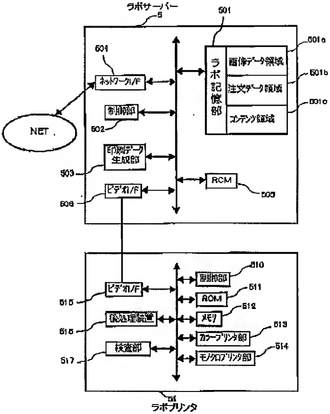
[Drawing 6]


画像データアップロード装置
カメラ
メディア選択・メディア読込
S601
受注ID発行
S602
受注ID送信
S603
読込済画像表示
S604
受注ID受信
S621
受注ID記憶
S622
リターン
プリント注文有り
S605
N
Y
画像選択
S606
注文入力
S607
注文総数≧a
S608
Y
N
読込画像数≧b
S609
Y
個人情報入力
S610
N
センターサーバー
受注IDと
画像データ
個人データ
(及び注文有の場合は
注文データ)
の対応付け
S611
受信
S631
送信
S612
記憶
S632
着信通知
S633
S613
N
着信通知
Y
リターン
リターン

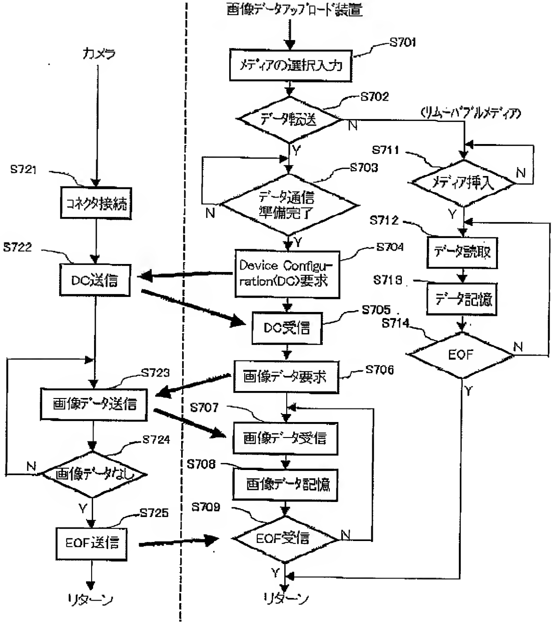
[Drawing 2]


PC－カメラ間通信
(オーダー時)
カメラ
PC
SSPLIT Token IN
DATA(CUコード)
ACK
カメラ
RAM
112
ROM
111
撮像部
110
表示部
109
信号処理
108
全体制御
107
識別情報記憶部
101
操作部
102
103
カードI/F
メモリカード
8
通信I/F
104
USBコネクタ
105
電源
106
各回路へ
USBケーブル
クライアントPC 3
NET
キーボード
マウス

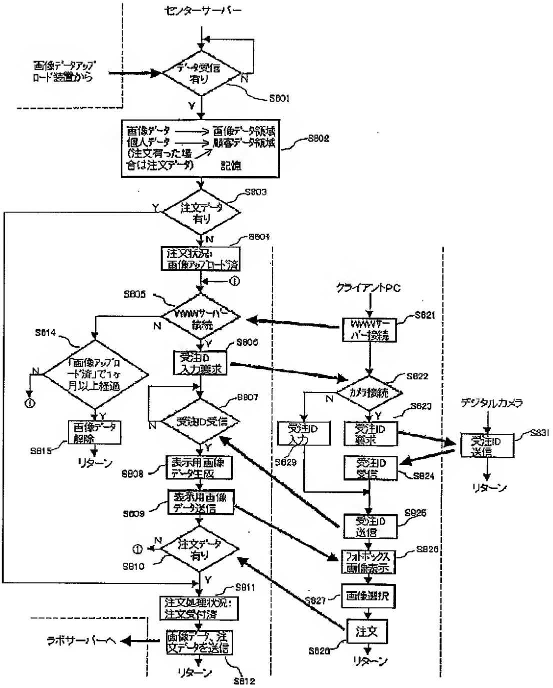
[Drawing 5]


ラボサーバー
5
501
501a
501b
501c
504
ネットワークI/F
ラボ記憶部
画像データ領域
注文データ領域
コンテンツ領域
NET
制御部
502
印刷データ生成部
503
ROM
505
ビデオI/F
506
510
制御部
511
ROM
512
メモリ
513
カラープリンタ部
514
モノクロプリンタ部
ビデオI/F
515
後処理装置
516
検査部
517
51
ラボプリンタ

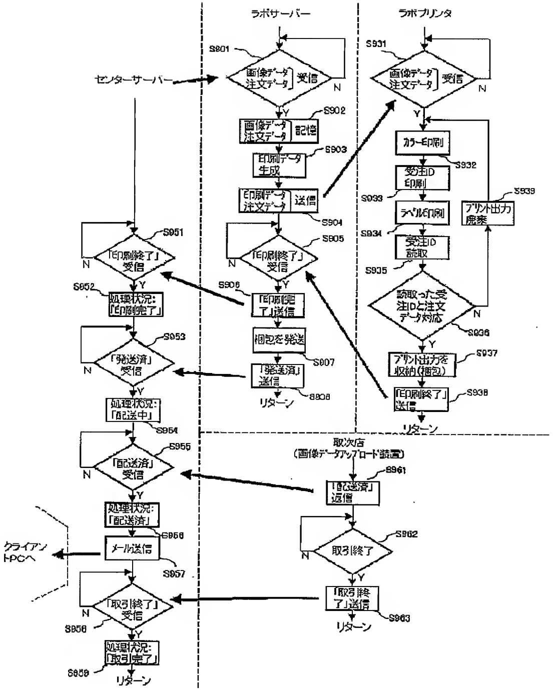
[Drawing 7]


画像データアップロード装置
S701
メディアの選択入力
S702
データ転送
N
(リムーバブルメディア)
Y
S711
メディア挿入
N
Y
S703
データ通信準備完了
N
Y
S712
データ読取
S713
データ記憶
S714
EOF
N
Y
S704
Device Configuration(DC)要求
S705
DC受信
S706
画像データ要求
S707
画像データ受信
S708
画像データ記憶
S709
EOF受信
N
Y
リターン
カメラ
S721
コネクタ接続
S722
DC送信
S723
画像データ送信
S724
画像データなし
N
Y
S725
EOF送信
リターン

[Drawing 8]


センターサーバー
画像データアップロード装置から
データ受信有り
N
S801
Y
画像データ → 画像データ領域
個人データ → 顧客データ領域
(注文有った場合は注文データ)
記憶
S802
S803
注文データ有り
Y
N
S804
注文状況：画像アップロード済
①
S805
WWWサーバー接続
N
Y
S814
「画像アップロード済」で1ヶ月以上経過
N
①
Y
画像データ解除
S815
リターン
S806
受注ID入力要求
S807
受注ID受信
N
Y
表示用画像データ生成
S808
表示用画像データ送信
S809
①
N
注文データ有り
S810
Y
S811
注文処理状況：注文受付済
ラボサーバーへ
画像データ、注文データを送信
リターン
S812
クライアントPC
WWWサーバー接続
S821
S822
カメラ接続
N
Y
S823
受注ID入力
S829
受注ID要求
受注ID受信
S824
受注ID送信
S825
フォトボックス画像表示
S826
S827
画像選択
注文
S828
リターン
デジタルカメラ
受注ID送信
S831
リターン

[Drawing 9]


ラボサーバー
ラボプリンタ
センターサーバー
S901
画像データ
注文データ
受信
N
Y
S902
画像データ
注文データ
記憶
S903
印刷データ
生成
印刷データ
注文データ
送信
S904
S905
「印刷終了」
受信
N
Y
S906
「印刷完了」送信
梱包を発送
S907
「発送済」
送信
S908
リターン
S931
画像データ
注文データ
受信
N
Y
カラー印刷
S932
受注ID
印刷
S933
ラベル印刷
S934
受注ID
読取
S935
読取った受注IDと注文データ対応
N
S936
Y
プリント出力を
収納(梱包)
S937
「印刷終了」
送信
S938
リターン
プリント出力
廃棄
S939
S951
「印刷終了」
受信
N
Y
S952
処理状況:
「印刷完了」
S953
「発送済」
受信
N
Y
処理状況:
「配送中」
S954
S955
「配送済」
受信
N
Y
処理状況:
「配送済」
S956
メール送信
S957
クライアントPCへ
「取引終了」
受信
N
S958
Y
処理状況:
「取引完了」
S959
リターン
取次店
(画像データアップロード装置)
S961
「配送済」
返信
S962
取引終了
N
Y
「取引終
了」送信
S963
リターン

[Translation done.]